

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A bus interface control for selectively supplying pull-up voltage to each of a plurality of signal lines of a bus, comprising:
a plurality of pull-up circuits, each connected to a corresponding one of the signal lines and isolated from the other pull-up circuits to prevent signals from the corresponding one of the signal lines passing through the pull-up circuit to another one of the signal lines;
and
a multi-mode power source configured to connect to an enable signal line of the bus, wherein the power source, in response to an enable signal carried on the enable signal line, operates in one of at least a first and a second power mode; wherein in the first power mode the power source provides power at a particular voltage level to each of the plurality of pull-up circuits and wherein in the second power mode the power source does not provide power at the particular voltage level to the plurality of pull-up circuits. ~~that, in a first power mode, powers the plurality of pull-up circuits and, in a second power mode, does not power the plurality of pull-up circuits.~~
2. (Original) The bus interface control of Claim 1, wherein each pull-up circuit is isolated from the other pull-up circuits by a diode.
3. (Original) The bus interface control of Claim 1, wherein each pull-up circuit is isolated from the other pull-up circuits by a Schottky diode.
4. (Canceled)

5. (Currently Amended) The bus interface control of Claim ~~[[4]]~~1, wherein the multi-mode power source comprises a voltage regulator that can be selectively enabled ~~by a voltage regulator~~ the enable signal.
6. (Currently Amended) The bus interface control of Claim ~~[[4]]~~1, wherein the multi-mode power source comprises a switch circuit between a power source and the plurality of pull-up circuits.
7. (Original) The bus interface control of Claim 6, wherein the switch circuit comprises a field-effect transistor.
8. (Original) The bus interface control of Claim 1, further comprising a switchable bus bridge that is capable of operating in at least two bridging modes and, in a first bridging mode, connects at least some of the signal lines to a second bus and, in a second bridging mode, does not connect at least some of the signal lines to the second bus.
9. (Currently Amended) The bus interface control of Claim 8, wherein the bridging mode is responsive to ~~[[an]]~~ the enable signal of the bus.
10. (Canceled)
11. (Original) The bus interface control of Claim 8, wherein the plurality of pull-up circuits, the multi-mode power source and the switchable bus bridge are co-located on a removable circuit board.
12. (Original) The bus interface control of Claim 8, wherein the bus is a Compact PCI bus.
13. (Original) The bus interface control of Claim 1, wherein the plurality of pull-up circuits and the multi-mode power source are implemented in a single integrated circuit.
14. (Original) The bus interface control of Claim 13, wherein the single integrated circuit further comprises a switchable bus bridge that is capable of operating in at least two bridging modes and, in a first bridging mode, connects at least some of the signal lines to a second bus and, in a second bridging mode, does not connect at least some of the signal lines to the second bus.

15. (Currently Amended) A bus interface control for selectively connecting signal lines of a first bus to a second bus, comprising:

a plurality of pull-up circuits, each connected to a corresponding one of the signal lines of the first bus and isolated from the other pull-up circuits by a diode to prevent signals from the corresponding one of the signal lines of the first bus passing through the pull-up circuit to another one of the signal lines of the first bus;

a voltage regulator configured to connect to an enable signal line of the bus, wherein the voltage regulator , in response to an voltage regulator enable signal carried on the enable signal line operates in one of at least a first and a second power mode, wherein in the first power mode the power source provides power at a particular voltage level to each of the plurality of pull-up circuits and wherein in the second power mode the power source does not provide power at the particular voltage level to the plurality of pull-up circuits ~~that can be selectively enabled by a voltage regulator enable signal and that, in a first power mode, powers the plurality of pull-up circuits and, in a second power mode, does not power the plurality of pull-up circuits, wherein the power mode is responsive to an enable signal of the first bus;~~ and

a switchable bus bridge that is capable of operating in at least two bridging modes and, in a first bridging mode, connects at least some of the signal lines of the first bus to the second bus and, in a second bridging mode, does not connect at least some of the signal lines of the first bus to the second bus, wherein the bridging mode is responsive to the enable signal of the first bus.

16. (Original) The bus interface control of Claim 15, wherein the bus is a Compact PCI bus.

17. (Original) The bus interface control of Claim 15, wherein the diode is a Schottky diode.

18. (Currently Amended) A bus interface control for selectively connecting signal lines of a first bus to a second bus, comprising:

a plurality of pull-up circuits, each connected to a corresponding one of the signal lines of the first bus and isolated from the other pull-up circuits by a diode to prevent signals from the corresponding one of the signal lines of the first bus passing through the pull-up circuit to another one of the signal lines of the first bus;

a switch circuit between a power source and the plurality of pull-up circuits, wherein the power source and switch circuit are configured such that, in response to an enable signal carried on an enable signal line of the bus, the power source and switch circuit operate in one of at least a first and a second power mode, wherein in the first power mode the power source provides power at a particular voltage level to each of the plurality of pull-up circuits via the switch circuit and wherein in the second power mode the power source does not provide power at the particular voltage level to the plurality of pull-up circuits;

~~that, in a first power mode, powers the plurality of pull-up circuits and, in a second power mode, does not power the plurality of pull-up circuits, wherein the power mode is responsive to an enable signal of the first bus; and~~

a switchable bus bridge that is capable of operating in at least two bridging modes and, in a first bridging mode, connects at least some of the signal lines of the first bus to the second bus and, in a second bridging mode, does not connect at least some of the signal lines of the first bus to the second bus, wherein the bridging mode is responsive to the enable signal of the first bus.

19. (Original) The bus interface control of Claim 18, wherein the bus is a Compact PCI bus.

20. (Original) The bus interface control of Claim 18, wherein the diode is a Schottky diode.
21. (Original) The bus interface control of Claim 18, wherein the switch circuit comprises a field-effect transistor.
22. (Currently Amended) A bus interface control for controlling an interface to a bus having a plurality of signal lines and an enable signal line, comprising:
isolation means for isolating each of the signal lines of the bus from other signal lines of the bus; and
pull-up means for selectively providing pull-up voltage to each of the signal lines of the bus;
wherein the interface operates in one of a least a first power mode and a second power mode based on an enable signal carried on the enable signal line of the bus;
wherein, in the first power mode, the pull-up means provides a pull-up voltage to each of the signal lines; and
wherein, in the second power mode, the pull-up means does not provide the pull-up voltage to the signal lines.
23. (Original) The bus interface control of Claim 22, wherein the isolation means comprises a diode.
24. (Original) The bus interface control of Claim 22, wherein the isolation means comprises a Schottky diode.
25. (Original) The bus interface of Claim 22, wherein the pull-up means comprises a voltage regulator that can be selectively enabled by a voltage regulator enable signal.
26. (Canceled)
27. (Original) The bus interface control of Claim 22, wherein the pull-up means comprises a switch circuit between a power source and the signal lines.
28. (Original) The bus interface control of Claim 26, wherein the switch circuit comprises a field-effect transition.

29. (Original) The bus interface control of Claim 22, further comprising bus bridge means for selectively bridging at least some of the plurality of signal lines of the bus to a second bus.
30. (Currently Amended) The bus interface control of Claim 29, wherein the bus bridge means is controlled based on ~~[[an]]~~ the enable signal of the bus.
31. (Original) The bus interface control of Claim 29, wherein the bus is a Compact PCI bus.
32. (Currently Amended) A method of controlling an interface to a bus having a plurality of signal lines and an enable signal line, comprising:
in a first ~~one~~ power mode, providing pull-up voltage to each of the signal lines;
~~and,~~
in ~~another~~ a second power mode, not providing the pull-up voltage;
wherein the interface operates in either the first mode or the second mode based on an enable signal carried on the enable signal line of the bus; and
isolating each of the plurality of signal lines from other signal lines to prevent signals from any of the signal lines passing to another signal line.
33. (Original) The method of Claim 32, wherein the isolating comprises blocking a signal with a diode.
34. (Original) The method of Claim 32, wherein the isolating comprises blocking a signal with a Schottky diode.
35. (Canceled)
36. (Original) The method of Claim 32, wherein the providing pull-up voltage comprises enabling a multi-mode power source connected to the plurality of signal lines of the bus.
37. (Currently Amended) The method of Claim 35, wherein the multi-mode power source comprises a voltage regulator that can be selectively enabled by ~~a voltage regulator~~ the enable signal.

38. (Original) The method of Claim 35, wherein the multi-mode power source comprises a switch circuit between a power source and the plurality of signal lines of the bus.

39. (Original) The method of Claim 38, wherein the switch circuit comprises a field-effect transistor.

40. (Original) The method of Claim 32, further comprising:
in a first bridging mode, bridging at least some of the plurality of signal lines to a second bus and, in another bridging mode, not bridging the at least some of the signal lines to the second bus.

41. (Currently Amended) The method of Claim 40, further comprising determining the bridging mode based on ~~[[an]]~~ the enable signal of the bus.

42. (Currently Amended) A bus interface control for selectively supplying pull-up voltage to each of a plurality of signal lines of a bus, comprising:
a multi-mode power source capable of operating in at least a first and a second power mode, the multi-mode power source configured to connect to an enable signal line of the bus ~~two power modes~~;

a plurality of pull-up circuits, each connected between a corresponding one of the signal lines and the multi-mode power source; and

a plurality of diodes, each connected in series with one of the plurality of pull-up circuits and between the corresponding one of the signal lines and the multi-mode power source and, thereby preventing current flowing in one direction through the corresponding one of the plurality of pull-up circuits;

wherein, in a first power mode, the multi-mode power source powers the plurality of pull-up circuits and, in a second power mode, the multi-mode power source does not power the plurality of pull-up circuits; and

wherein the multi-mode power source operates in the first or second power modes based on an enable signal carried on the enable signal line.

43. (Original) The bus interface control of Claim 42, wherein each diode comprises:
a Schottky diode.

44. (Currently Amended) The bus interface control of Claim 42, wherein the multi-mode power source comprises:

a voltage regulator having a voltage regulator enable signal input connected to [[an]] the enable signal line of the bus.

45. (Currently Amended) The bus interface control of Claim 42, wherein the multi-mode power source comprises:

a power source and

a switch circuit between the power source and the plurality of pull-up circuits, wherein the switch circuit has a switch circuit enable signal input connected to [[an]] the enable signal line of the bus.

46. (Currently Amended) The bus interface control of Claim 42, further comprising:

a switchable bus bridge connected between the signal lines and a second bus, wherein the switchable bus bridge is capable of operating in at least two bridging modes and has a bridge enable signal input connected to [[an]] the enable signal line of the bus, whereby in a first bridging mode, the switchable bus bridge connects at least some of the signal lines to the second bus and, in a second bridging mode, the switchable bus bridge does not connect at least some of the signal lines to the second bus.